REMARKS

Claims 3-5, 8-16, and 23-27 are all the claims presently pending in the application.

Applicant acknowledges and appreciates that claims 11-16 and 23-27 are <u>allowed</u>. For the reasons set forth below, however, Applicant respectfully submits that <u>all</u> of the pending claims are allowable over the prior art of record.

Claims 3 and 8 stand rejected under 35 U.S.C. 102(e) as being anticipated by Gelman et al. (US 6,493,348) (hereinafter Gelman). **Claims 5 and 10** stand rejected under 35 U.S.C. 102(e) as being anticipated by Johnson (US 6,765,910). **Claims 4 and 9** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman in view of Johnson.

These rejections respectfully are <u>traversed</u>.

I.   THE CLAIMED INVENTION

Claim 3 recites a demultiplexing method of receiving a multiplexed signal. The multiplexed signal is obtained by multiplexing a plurality of communication signals from a multiplexed signal transmitting section, demultiplexing the multiplexed signal into communication signals, and transmitting the demultiplexed communication signals to a communication signal receiving section. The method of receiving a multiplexed signal includes adding an identification address to each of the plurality of communication signals. The identification address is<u> preassigned to a predetermined signal identifying section,</u> through which a communication signal passes in a multiplexing system including the multiplexed signal transmitting section and the communication signal receiving section. The method of receiving a multiplexed signal also includes outputting each of the communication signals, extracting the identification address from each of the output signals, and demultiplexing the multiplexed signal for each of the communication signals on the basis of the extracted identification address.

Claim 5 recites a demultiplexing method of demultiplexing a multiplexed

signal obtained by multiplexing a plurality of packets into packets. The method includes

extracting an IP address from each packet in the received multiplexed signal for each of the

plurality of packets, the IP being preassigned to a predetermined signal identifying section

through which a communication signal passes, and demultiplexing the multiplexed signal into

PPP packets on the basis of the extracted IP addresses.

Claim 8 recites a demultiplexing apparatus which is connected to a multiplexed signal

transmitting section through a multiplex communication path. The demultiplexing apparatus

demultiplexes a multiplexed signal received from the multiplex communication path, and

transmits demultiplexed communication signals to a communication signal receiving section

through communication paths for the respective communication signals. The demultiplexing

apparatus includes address extracting means, connected to the multiplex communication path,

for extracting an identification address added to each of the communication signals in the

multiplexed signal received from the multiplex communication path. The identification

addresses added are preassigned to a predetermined signal identifying section, through which

a communication signal passes in a demultiplexing section including said multiplexed signal

transmitting section and said communication signal receiving section. The demultiplexing

apparatus also includes demultiplexing means for demultiplexing the multiplexed signal into

the respective communication signals on the basis of the identification addresses of the

respective communication signals which are extracted by the address extracting means.

Claim 10 recites a demultiplexing apparatus which is connected to a multiplex

communication path through which a multiplexed signal, obtained by multiplexing

packets addressed to subscriber apparatuses, is transmitted. The demultiplexing apparatus

demultiplexes the multiplexed signal received from the multiplex communication path, and

outputs each demultiplexed communication signal. The demultiplexing apparatus includes address extracting means, connected to the multiplex communication path, for extracting an IP address of each packet in the multiplexed signal received from the multiplex communication path, the IP address being preassigned to a predetermined signal section of the multiplexed signal and demultiplexing means for demultiplexing the multiplexed signal into the respective packets on the basis of the IP addresses of the respective packets extracted by the address extracting means.

A conventional multiplex communication apparatus, however, requires a discrimination apparatus for an Asynchronous Transfer Mode function that must be installed at an entrance to a backbone network. In addition, for new subscribers, a new discrimination apparatus must be installed for each new subscriber, creating additional cost and complexity.

The present invention, however, provides, "an identification address, for each of the communication signals, which is added to each of the communication signals in the multiplexed signal received from the multiplex communication path and preassigned to a predetermined signal identifying section through which a communication signal passes in a demultiplexing section including said multiplexed signal transmitting section and said communication signal receiving section," as recited in claim 1. These features provide a simpler arrangement for PPP processing. (See Application, Page 7, Line 17 to Page 8, Line 5)

II.   THE PRIOR ART REJECTIONS

a.   Gelman

On page 2 of the Office Action, the Examiner rejects claims 3 and 8 under 35 U.S.C. 102(e) as being anticipated by Gelman. Applicant submits, however, that there are elements of the claimed invention which are not taught by Gelman

To anticipate a claim, a reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In particular, the Examiner appears to first recite claim 3 after providing a conclusory statement that Gelman discloses the respective elements of claims 3 and 8. However, the Examiner does not provide any guidance as to how Gelman satisfies the requirements of 35 U.S.C. §102 other than by ending the paragraph with a parenthetical reference to FIG. 2, alleging that "a MAC layer address is assigned and used as identification address and each signal is demultiplexed at the DSLAM to reach their destination using the MAC address."

The Examiner therefore appears to be referring to the prior art section of Gelman. That is, FIG. 2. Nonetheless, the prior art portion of Gelman does not disclose or suggest, for example, "adding, to each of the plurality of communication signals, <u>an identification address preassigned to a predetermined signal identifying section</u> through which a communication signal passes in a multiplexing system including the multiplexed signal transmitting section and the communication signal receiving section," as recited in independent claim 3, and similarly recited in independent claim 8. Instead, Gelman discloses protocol stack 30 and 32, and, in particular, an operation of web server 28*a* (see Col. 4, Lines 18-39) where a route between web server 28*a* and terminal 15 is disclosed .

The only disclosure provided with respect to FIG. 2 is that the IP edge routers provide a routing mechanism and "provide the Ethernet bridging capability in order to be able to address the user's LAN." (*See* Gelman, Col. 4, Lines 40-46) Further, an address resolution protocol <u>broadcasts the address **to be resolved**</u> on the LANs, resulting in increased traffic. (see Col. 4, Lines 60-65) Therefore, <u>instead</u> of disclosing a preassigned address, as the Examiner alleged, Gelman requires the router to broadcast and then resolve the relevant addresses.

Nonetheless, on page 5 of the Office Action, the Examiner addresses Applicant's arguments filed on August 22, 2007 by alleging that Gelman "<u>inherently</u> contains receiving a multiplexed signal (since it is demultipleixng a signal), adding an identification address to each of the plurality of communication signals (assigning a MAC layer address), and demultiplexing the signals based on the identification address (data based on the MAC address and is demultiplexed to the destination)." Even in ignoring that the Examiner has not specifically alleged that any particular portion of Gelman discloses or suggests the recited features, the inherency allegation relied on by the Examiner is also improper.

The Examiner appears to be relying on MPEP 2131.01 to support his position regarding the inherency of claims 3 and 8. However, Applicant would point out that MPEP 2131.01 provides that multiple references may in some very limited circumstances be used in a 35 USC 102 rejection, MPEP 2131.01 provides that when extrinsic evidence which is used to "fill a gap" when the reference is silent about an asserted inherent characteristic, the extrinsic evidence must make clear that the missing descriptive matter is **necessarily present** in the thing described in the reference, and that it would be so recognized by persons of ordinary skill (e.g., see *Continental Can Co. USA v. Monsanto Co.,* 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991)).

With respect to the Examiner's allegations, the Examiner has <u>failed to make clear that</u> <u>the missing matter is necessarily present</u>. Thus, the Examiner has improperly interpreted Gelman to disclose or suggest "adding, to each of the plurality of communication signals, <u>an</u> <u>identification address **preassigned** to a predetermined signal identifying section</u> through which a communication signal passes in a multiplexing system including the multiplexed signal transmitting section and the communication signal receiving section," as recited in independent claim 3, and similarly recited in independent claim 8.

Therefore, because Gelman does not disclose or suggest every feature recited in independent claims 3 and 8, these claims are improperly rejected in light of Gelman. Accordingly, Applicant submits that claims 3 and 8 are in condition for allowance. With respect to claims 4 and 9, which depend from independent claims 3 and 8 respectively, each of these claims contain all the limitations contained within claims 3 and 8 and are therefore also in condition for allowance.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

b.   Johnson

On page 3 of the Office Action, the Examiner alleges that Johnson discloses the claimed invention of claims 5 and 10.   Applicant submits, however, there are features recited in the rejected claims that are neither disclosed nor suggested by Johnson.

Johnson is directed to a multiplex communication system to communicate with customers. In particular, the Examiner alleges that discloses all the elements recited in claims 5 and 10. The Examiner cites Col. 8, Lines 22-40 as evidence for these allegations. Johnson, however, discloses that switch router 30 <u>separates packets out of a PPP stream when it detects</u> <u>packets that are intended for the server.</u> That is, the portion cited by the Examiner discloses a

version of the conventional communication system where a router is required to search each packet to determine if the packet is intended for the server of customer.

Therefore, contrary to the assertions of the Examiner, Johnson does not teach or suggest, "for each of the plurality of packets, the IP address being preassigned to a predetermined signal identifying section through which a communication signal passes," as recited in independent claim 5, and similarly recited in independent claim 10.

Therefore, because Johnson does not disclose or suggest every feature recited in independent claims 5 and 10, these claims are improperly rejected in light of Johnson. Accordingly, Applicant submits that claims 5 and 10 are in condition for allowance.

Therefore, Applicant respectfully request the Examiner to reconsider and withdraw this rejection

c.   Gelman in view of Johnson.

On page 4 of the Office Action, the Examiner rejects dependent claims 4 and 9 under 35 U.S.C. § 103(a) over Gelman in view in Johnson.

However, as discussed above, dependent claims 4 and 9 depend from independent claims 3 and 8, respectively. Accordingly, dependent claims 4 and 9 contain every limitation contained within claims 3 and 8. As discussed above, Gelman fails to disclose or suggest every element recited within claims 3 and 8. Furthermore, pursuant to the discussion regarding claims 5 and 10, Johnson fails to make up for Gelman's deficiencies.

Therefore, because neither Gelman nor Johnson teach or suggest every feature recited in dependent claims 4 and 9, these claims are improperly rejected in light of Gelman and Johnson. Accordingly, Applicant submits that dependent claims 4 and 9 are in condition for allowance.

Therefore, Applicant respectfully request the Examiner to reconsider and withdraw this rejection

III.   CONCLUSION

In view of the foregoing, Applicant submits that claims 3-5, 8-16, and 23-27, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for <u>allowance</u>. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 2|14|8

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